

A new classic

Graham Audio have gone back to a classic design for their new loudspeaker – a remake of the famous BBC LS5/9 from over 30 years ago. Jon Myles says it's been worth the wait.



It's 1983. What's happening? Well, the Chancellor announces public spending cuts, England's football team are castigated after losing at Wembley and red rain falls across the UK due to storms in the Sahara. It seems some things never change.

In the world of hi-fi the year sees the CD format go on sale in the UK...and the launch of the BBC's LS5/9 monitor loudspeaker.

While spending cuts, football embarrassments and strange weather patterns have stayed with us, the CD is struggling to hold its own in the face of the digital download onslaught and as for the LS9/5...well, surely things have moved on in loudspeaker design during the past 30-odd years to make it somewhat redundant?

Maybe not, if you hold to the

tenet that a good loudspeaker design can stand the test of time. And the BBC's have certainly done that – as the success of the various licensed LS3/5a variants have shown.

While that model was designed primarily for speech monitoring in small spaces, it has still proved a classic choice for audiophiles who place sonic accuracy above artificiality.

Its LS5/9 counterpart was a larger, front-ported loudspeaker engineered to give a greater sonic range and be suitable for larger areas.

But that 30-year time gap still proved a hurdle when Devon-based Graham Audio decided to revive the classic design.

Chief among them was while the 34mm soft dome tweeter used in the original is still available from French manufacturer Audax, the 200mm mid/bass unit once manufactured by Rogers has long gone out of production.

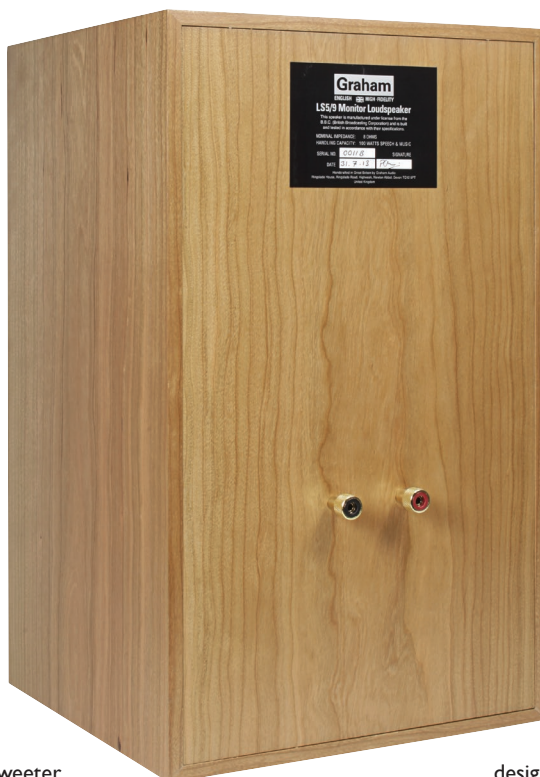
To compensate Graham Audio turned to loudspeaker expert Derek Hughes – son of Spendor founders Spencer and Dorothy Hughes – to design a new main driver as close as possible to the original specifications.

The new unit uses the same polypropylene diaphragm as the original loudspeaker but has slightly different characteristics, meaning a revised crossover also needed to be brought into play.

That done, the rest of the changes are minimal. Dimensions are the same as the original at 28cm x 27.5cm x 46cm, while the cabinet is thin-walled birch ply – although a more high-tech constrained layer critical damping is used instead of the original's bitumen.

Take off the recessed cloth grilles as well and you'll see that BBC monitor design has been followed to the letter. In short, it's less than beautiful. The veneered baffle features a plethora of screws as well as a metal grille over the tweeter assembly (with more screws) and a hand-soldered adjustment plate for high-frequency level.

Frankly, you'll probably want to put the grilles back rather quickly. But, then again, the LS5/9 wasn't designed to look good – merely



In true BBC fashion the Graham Audio LS5/9s feature a single set of high-quality loudspeaker binding posts.

sound accurate.

Round the back there's a single pair of sturdy speaker binding posts.

So, all in all, the Graham Audio does look every inch a design from the early 1980s compared to some of today's sculpted, injection-moulded cabinet loudspeakers. But, as we all know, it's the sound that counts...

"The polypropylene mid/bass driver has a deliciously creamy quality that makes all forms of music sound rich and appealing"

SOUND QUALITY

At first listen, the LS5/9 may not make you sit up and take notice. If ever a loudspeaker needed time to work its charms, it is this one. The more I listened the more I became aware of just how impressive it is.

First off, there's a warm, natural, easy-going nature to the way it goes about presenting the music. The LS5/9 digs deep into the musical information of my favourite tracks,

but it doesn't shout about it in the manner of some recent designs that over-emphasise the bass or treble to gain showroom attention.

With the Grahams the presentation is more nuanced – and can be all the better for it.

A slice of charging jazz like Acoustic Ladyland's 'Last Chance Disco' has tremendous depth and scope to its presentation. This is densely-packed music that needs a resolving loudspeaker to adequately unpick the various instrumental strands – and the LS5/9s do it with aplomb.

There's no sense of stress or strain to the presentation – just an undeniable sense of confidence about the way the loudspeakers go about their business.

No wonder they were designed by the BBC for monitoring work, as they have the ability to get out of the way of the music and give you the sound of the partnering equipment.

Choose that partnership carefully, though. These LS5/9s benefit from a good slice of power to really give of their best. Think 60 Watts or more of solid power to really get them singing.

They worked well on the end of a Naim Supernait 2 – seeming to thrive on the amplifier's natural rhythmic swing and timing. Couple them with something less beefy and the sound can become a trifle thin.

Also make sure to position

carefully. I found them best with a good degree of toe-in and rather wider apart but closer to the listening seat than normal. That might well be down to their monitor design heritage.

But spend the time to get the positioning right and there is an ideal sweet spot that you can't miss when you get them set up correctly.

My music flowed and soared with an undeniable naturalness. Listening

to the piano of Keith Jarrett on Arvo Part's 'Tabula Rasa', it had both body and resonance. When the low notes faded away they did so in an entirely realistic way – just as you'd imagine they sounded in the studio.

Switching to female vocals – such as Nico on The Velvet Underground's 'All Tomorrow's Parties' – and she was there in front of me.

Fans of pounding dance tracks may find the bass slightly lacking as, in common with most standmount loudspeakers, the LS5/9s don't go down to sub-sonic levels.

But there is certainly plenty of low-end power on hand if the music demands it, with the 'speakers having a distinct thump to them.

The rumbling synth lines of Leftfield's 'Rhythm And Stealth' had plenty of attack. There was a slight sense of overhang at times – with a feeling that the bass was lagging just a little behind the rest of the music but nothing which detracted from the overall propulsive feel of the album.

But it's when you move up the frequency register that things really start to shine.

The polypropylene mid/bass driver has a deliciously creamy quality that makes all forms of music sound rich and appealing.

It is also extremely good at layering the sounds in complex pieces so you can hear into and around the musical parts.

Take John Coltrane's 'Ascension'. This is a squall of a free jazz sound that can sound hard and harsh on some modern loudspeakers – especially those that seem to throw the sound at you.

Via the Gramams it's a much more measured piece of music. The tonal balance is spot on while individual musicians are clearly definable in the mix. In other words it's doing just what a studio monitor should by letting you hear the sound without imposing too much of its own character.

Admittedly, there may be some people who find this presentation a little too safe and unexciting – relegating the LS5/9s to the realms of 'pipe and slippers' equipment fit only for those who crave a laid-back presentation.

But that would be a mistake. These 'speakers have enough detail



Upper treble rolls away above 10kHz - likely due to the protective grille while a factory-set adjustment plate (left) allows for high-frequency adjustment.

they'll reveal it in all its glory. In the end they just sound honest.

CONCLUSION

Graham Audio has done a fine job with its BBC-licensed LS5/9.

It's overall sound is well-balanced, smooth and even. There's no stinging treble to make your ears ring nor a thumping bass that overwhelms everything else.

Yes, some loudspeakers of a more modern vintage may sound superficially more exciting at first listen – but the LS5/9s are more likely to reward in the long-term as they let the music flow without firing it at you full bore.

The original BBC design proved popular 30 years ago – and I'd have a bet the latest Graham Audio iteration could well be giving listeners musical pleasure 30 years from now.

Just remember to partner them with a suitably powerful amplifier, sturdy stands and take care with positioning.

Then sit back and enjoy.

and drive to sound exciting when the music demands it. But they can also be extremely refined when that's what is required.

Play some modern, signal-compressed rock or pop and the Gramams will soon let you know all about it. But let them have well-recorded high-resolution music and

MEASURED PERFORMANCE

Our frequency response analysis shows a smooth response over most of the audio band. There was no dip between midrange and treble units to soften the sound, although a phase dip did appear as the microphone was moved up to the tweeter axis and above. Because the drivers are physically far apart this is inevitable.

Upper treble rolls away above 10kHz even on the tweeter axis,

likely due to the protective grill. There is also some lift in upper bass, just enough to ensure the Graham has body to its sound.

Lower bass peaks quite substantially around 70Hz our analysis shows, and this correlates with box overhangs visible in a 200mS decay analysis, so bass will be prominent and possibly a tad boxy or fulsome. The port, tuned to 45Hz extends bass down well, so in all the Graham will have strong bass, if not deep subsonics.

The bass unit has a high DCR of 7 Ohms – most are 4 Ohms these days – and this results in a high overall measured impedance value of 12 Ohms. This high value lowers voltage sensitivity, the Graham managing a reasonable 87dB from one nominal Watt of input (2.8V). It needs amplifiers of 60 Watts or more to go loud.

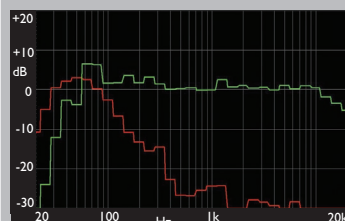
Although a 200mS decay analysis revealed bass overhang at low frequencies, across the midband the bass/midrange unit was clean in its output, suggesting low coloration.

The Graham Audio LS 5/9 measures well, with distinctive characteristics. It will have an 'easy' sounding balance, with fulsome lower frequencies and strong bass. It needs power to go loud.

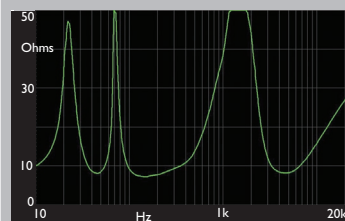
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FREQUENCY RESPONSE

Green - driver output
Red - port output



IMPEDANCE



GRAHAM AUDIO LS5/9 £3,450



OUTSTANDING - amongst the best

VERDICT

A well-engineered update of a classic loudspeaker design. Superbly musical and enjoyable

FOR

- smooth mid and treble
- detail
- timing

AGAINST

- needs a powerful amplifier
- slight bass emphasis

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